

IN THE DRAWINGS

Figs. 3-8 replace original Figs. 3-8 to include indicia and lead lines. Figs. 9-10 are labeled as Background Art. No new matter is added.

Attachment: Replacement Sheets (3)

REMARKS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 9-14 are pending in the application, with Claims 1-8 canceled and Claims 9-14 added by the present amendment.

In the outstanding Office Action, the drawings were objected to; the Title was objected to; Claims 1 and 6 were objected to; Claims 1, 2 and 4-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Sekine et al. (U.S. Patent No. 5,903,822, hereinafter Sekine); and Claims 3 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sekine.

The Title and figures are amended as requested in the Official Action. No new matter is added.

Briefly recapitulating, new Claim 9 is directed to a radio set including a first ground pattern and a second ground pattern adjacent to the first ground pattern. The radio set also includes a connection means provided between the first and second ground pattern. The connection means electrically connects the first and second ground patterns. The radio set also includes a $\lambda/2$ monopole antenna which is powered by capacitive coupling by a side of the first ground pattern opposite to the connection means. The connection means is provided at a position about $\lambda/2$ from the capacitive coupling as viewed in the axial direction of the monopole antenna and causing the phase of electrical current flowing between the first and second ground pattern to be inverted. Applicant's claimed invention allows for improved radiation pattern characteristics.

Sekine describes portable radio equipment including an antenna, a housing connected to the antenna, where the housing includes a notch, and an internal circuit within the housing and connected to the antenna. The divided housing is connected via a conductor so the

housing portions vary distribution patterns of electromagnetic waves.¹ However, Sekine does not disclose or suggest a radio set that include a capacitor as recited in Applicant's new Claim 9.

In the present invention, capacitor 110 is provided and each of the antenna and the side of the first ground pattern has the length of $\lambda/2$ so that electric currents flowing in the antenna and the first ground pattern are in phase with each other. On the other hand, Sekine discloses an antenna and a first ground pattern, each having a length of $\lambda/4$, so that electric currents flowing in them are in phase with each other.

Figure 45 of Sekine shows a specific construction for an electrical switch 122. The switch includes a notch 101 provided in the housing 102. A diode 123 is connected to an end of an open end of the notch 102(a). A resistor 125 and a capacitor 124 are connected in parallel to the diode 123. The other end of the resistor 125 is connected to a controlled potential 126. The other end of the capacitor 124 is connected to the other end of the open end of the notch 102(b).

When a direct current flows through the electrical switch 122, a resistance value of the diode 123 is decreased, so that the radio frequency current flows in the open end 102 of the notch 101 is short circuited to the other open end 102(b) through the capacitor 124. Moreover, the capacitor 124 prevents the direct current from flowing to the housing 102, and the capacitor 124 operates to the short circuit against the radio frequency current. Assuming that a voltage of the control potential is a level approximately 5V, a value of the resistor 125 may be approximately 1K Ω and a value of the capacitor 124 may be approximately 10 pF.²

However, capacitor 124 of Sekine is not a capacitive coupling on a side of the first ground pattern opposite to a connection means and that powers a $\lambda/2$ monopole antenna, as recited in Applicants' Claim 9. That is, capacitor 124 of Sekine is not connected to a $\lambda/2$

¹ Sekine, Abstract.

² Sekine, col. 14, lines 47-67; Fig. 45.

monopole antenna, as recited in Applicants' claim. Also, capacitor 124 of Sekine is not located on a side of a first ground pattern opposite to a connection means, as recited in Applicants' claim.

MPEP § 2131 notes that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). “When a claim covers several structures or compositions, either generically or as alternatives, the claim is deemed anticipated if any of the structures or compositions within the scope of the claim is known in the prior art.” *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed. Cir. 2001) (claim to a system for setting a computer clock to an offset time to address the Year 2000 (Y2K) problem, applicable to records with year date data in “at least one of two-digit, three-digit, or four-digit” representations, was held anticipated by a system that offsets year dates in only two-digit formats). See also MPEP § 2131.02. “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Because Sekine does not disclose or suggest all the features recited in Claim 9, Sekine does not anticipate the invention recited in Claim 9, and all claims depending therefrom.

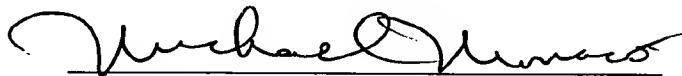
Also, even if a structure corresponding to Applicants' claimed capacitive coupling is provided between the antenna and the first ground pattern of Sekine, electric currents flowing in the antenna and the side of the first ground pattern would not in phase with each other. However, as noted above, Sekine specifically describes that the electric currents must be in phase. Because Sekine requires that the electric currents must be in phase, Applicants'

submit there is no teaching, suggestion, or motivation, either explicitly or implicitly, to modify Sekine to include Applicants' claimed capacitive coupling.³

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully requests and early and favorable action to that effect.

Respectfully submitted,

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³ MPEP § 2143.01 "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge of one of ordinary skill in the art."